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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/852,735	05/11/2001	Mototsugu Okushima	NE212-US	4991

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EXAMINER	
KITOV, ZEEV	
ART UNIT	**PAPER NUMBER**
2836	

DATE MAILED: 08/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action	Application No.	Applicant(s)	
	09/852,735	OKUSHIMA, MOTOTSUGU	
	Examiner	Art Unit	
	Zeev Kitov	2836	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 02 July 2004 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

PERIOD FOR REPLY [check either a) or b)]

a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.

b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.
ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on _____. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.

2. ☐ The proposed amendment(s) will not be entered because:

   (a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);

   (b) ☐ they raise the issue of new matter (see Note below);

   (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or

   (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

   NOTE: _____.

3. ☐ Applicant's reply has overcome the following rejection(s): _____.

4. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).

5. ☒ The a)☐ affidavit, b)☐ exhibit, or c)☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: *see Attachment*.

6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.

7. ☒ For purposes of Appeal, the proposed amendment(s) a)☐ will not be entered or b)☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

   The status of the claim(s) is (or will be) as follows:

   Claim(s) allowed: _____.

   Claim(s) objected to: _____.

   Claim(s) rejected: *37 - 67*.

   Claim(s) withdrawn from consideration: _____.

8. ☐ The drawing correction filed on _____ is a)☐ approved or b)☐ disapproved by the Examiner.

9. ☒ Note the attached Information Disclosure Statement(s)(PTO-1449) Paper No(s). *07/09/04*.

10. ☐ Other: _____

Attachment to Advisory Action

Response to Arguments

1. Applicant attacks a combination of the references of Li et al. and Maeda on the basis that "incorporating the vertical bipolar transistor structure of Maeda into the device of Li et al. would not allow the base contact to be at least twice as far from the base as the emitter contact". From that the Applicant comes to the conclusion that such modification would change the principle of operation of Li et al.

a) Applicant does not provide any evidence to support his notion that the combination of the vertical transistor structure of Maeda with teaching of Li et al. "would not allow the base contact to be at least twice as far from the base as the emitter contact".

b) The recited by Applicant feature of Li et al. structure that the base contact is positioned at distance at least twice far from the base as from the emitter contact (col. 6, lines 34 – 43), is a side issue and does not represent the principle of the device operation, as Applicant suggests. As a matter of fact, this feature is not mentioned in the Claims.

c) In response to Applicant's argument that "incorporating the vertical bipolar transistor structure of Maeda into the device of Li et al. would not allow the base contact to be at least twice as far from the base as the emitter contact", it has been held that the test for obviousness is not whether the features of one reference may be bodily incorporated into the other to produce the claimed subject matter but simply what the combination of

references makes obvious to one of ordinary skill in the pertinent art. *In re Bozek,* 163 USPQ 545 (CCPA 1969).

d) Applicant's criticism regarding combination of Li et al. and Maeda teachings essentially represents demand of structural incorporation of one into another. In response to Applicant's argument that "incorporating the vertical bipolar transistor structure of Maeda into the device of Li et al. would not allow the base contact to be at least twice as far from the base as the emitter contact", it has been held that the test for obviousness is not whether the features of one reference may be bodily incorporated into the other to produce the claimed subject matter but simply what the combination of references makes obvious to one of ordinary skill in the pertinent art. *In re Bozek,* 163 USPQ 545 (CCPA 1969).

e) With regard to rejection of Claims 37 – 40, 41, 45 and 47, the Examiner recites the elements of Li et al. reference, which are independent of particular manufacturing technology, such as a semiconductor substrate (a common element in any semiconductor structure); a CMOS inner circuit formed on the semiconductor substrate (variety of different technologies can be used for that); and an ESD protection circuit connected between the CMOS inner circuit and a pad, for protecting the CMOS inner circuit against an overvoltage applied to the pad; the ESD protection circuit includes a trigger element, switching on the bipolar transistor when the overvoltage is applied to said paid. None of the recited elements demands a specific manufacturing technology, such as lateral bipolar transistor. Therefore, the argument that the Li et al. and Maeda references are not combinable (page 22, lines 5 – 12) is baseless.

2. Examiner agrees with Applicant's statement: "one of ordinary skill in the art would not look to teachings of a horizontal bipolar transistor based on the teaching of Maeda" (page 19, lines 9 – 17). However, Examiner has never suggested that.

And Examiner cannot agree with the next statement: "Accordingly, one of the ordinary skill in the art would not be motivated to combine the horizontal bipolar transistor teachings of Li et al. with Maeda". The Maeda reference is used to improve deficiency of the primary reference of Li et al. in strict accordance to the rules of obviousness. Examiner is not familiar with any rule requiring establishing two mutually reciprocal motivations between the primary and the secondary reference.

3. On page 20, lines 9 – 24, Applicant again attempts to disqualify the reference on the same basis, i.e. switching the primary reference with the secondary and stating that there is no motivation for alleged modification of the secondary reference in view of primary one, which was addressed above.

4. Applicant argues (page 21, line 3 – page 22, line 4), that the structure of the Maeda structure vertical transistor does not fit the limitations of Claims 38 –40, 41, 45 and 47, i.e. a base and a collector of the vertical transistor are formed in a direction from a surface of the semiconductor substrate to a depth, and an emitter of the vertical bipolar transistor is formed on the surface of the substrate. According to him, Fig. 31 – 38 of Maeda show the structure different from Fig. 3 of Application. However, careful comparison of the figures has failed reveal any difference between them. As a matter of fact, Fig. 31 – 38 of Maeda show a base (element 67a in Fig. 38) and a collector of the vertical transistor (element 62a in Fig. 38) are formed in a direction from a surface of the

semiconductor substrate to a depth (one under another), and an emitter of the vertical bipolar transistor (element6 80a in Fig. 38) is formed on the surface of the substrate. More than that there no difference was found between structures shown in Fig. 3 of Application and Fig. 31 – 38 of Maeda.

5. The Applicant attempts to disqualify the McClure et al. reference on the basis that McCulre et al. does not teach all the elements of previous claim 37 (page 22, lines 19 – 21). In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

6. Examiner agrees with the Applicant's statement: "Any teaching of McClure et al. as to horizontal bipolar transistor would be irrelevant to a vertical bipolar transistor" (page 23, lines 1 – 3). However, Examiner never suggested using the teaching of the horizontal bipolar transistor of McClure. As was stated above (paragraph 1a), in view of deficiencies of the lateral bipolar transistor its replacement by the vertical transistor was suggested.

7. Applicant further attacks the reference of A. Sedra et al., Shigehara et al. and Kinusaga et al. on the basis that taken individually references do not teach all the elements of Claim 37. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642

F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zeev Kitov whose current telephone number is (571) 272 - 2052. The examiner can normally be reached on 8:00 – 4:30. If attempts to reach examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sircus can be reached on (571) 272 – 2800, Ext. 36. The fax phone number for organization where this application or proceedings is assigned is (703) 872-9306 for all communications.

Z.K.
07/26/2004

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